

Application Serial No: 10/550,836
Responsive to the Office Action mailed on: October 3, 2007

IN THE CLAIMS

Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A collapsible lens barrel whose lens group is advanced when an image is captured, the collapsible lens barrel comprising:
 - a driving frame for driving the lens group, comprising a cam pin and a demating prevention pin ~~that have an identical shape including a cylindrical portion and a tapered portion at its tip;~~
 - a cam frame comprising a cam groove and a demating prevention groove that mate with the cam pin and the demating prevention pin, respectively; and
 - a first protrusion provided on at least one side in an optical axis direction of a portion of the demating prevention groove with which the demating prevention pin mates when the driving frame is advanced;
 - wherein, in a state where the lens group has been advanced, ~~the cylindrical portion of the demating prevention pin may contact~~ contacts the first protrusion to prevent the cam pin from demating from the cam groove.
2. (Currently Amended) A collapsible lens barrel whose lens group is retracted when an image is not captured, the collapsible lens barrel comprising:
 - a driving frame for driving the lens group, comprising a cam pin and a demating prevention pin ~~that have an identical shape including a cylindrical portion and a tapered portion at its tip;~~
 - a cam frame comprising a cam groove and a demating prevention groove that mate with the cam pin and the demating prevention pin, respectively; and
 - a ~~second~~ protrusion provided on at least one side in an optical axis direction of a portion of the demating prevention groove with which the demating prevention pin mates when the driving frame is retracted;

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wherein, in a state where the lens group has been retracted, ~~the cylindrical portion of the demating prevention pin may contact~~contacts the ~~second~~ protrusion to prevent the cam pin from demating from the cam groove.

3. (Currently Amended) A collapsible lens barrel whose lens group is advanced when an image is captured and whose lens group is retracted when the image is not captured, the collapsible lens barrel comprising:

a driving frame for driving the lens group, comprising a cam pin and a demating prevention pin ~~that have an identical shape including a cylindrical portion and a tapered portion at its tip;~~

a cam frame comprising a cam groove and a demating prevention groove that mate with the cam pin and the demating prevention pin, respectively;

a first protrusion provided on at least one side in an optical axis direction of a portion of the demating prevention groove with which the demating prevention pin mates when the driving frame is advanced; and

a second protrusion provided on at least one side in the optical axis direction of a portion of the demating prevention groove with which the demating prevention pin mates when the driving frame is retracted;

wherein, in a state where the lens group has been advanced, ~~the cylindrical portion of the demating prevention pin may contact~~contacts the first protrusion to prevent the cam pin from demating from the cam groove, and

in a state where the lens group has been retracted, ~~the cylindrical portion of the demating prevention pin may contact~~contacts the second protrusion to prevent the cam pin from demating from the cam groove.

4. (Cancelled)

5. (Currently Amended) A collapsible lens barrel whose lens group is retracted when an image is not captured, the collapsible lens barrel comprising:

a driving frame for driving the lens group, comprising a cam pin ~~including a cylindrical portion and a tapered portion at its tip;~~

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a cam frame comprising a cam groove that mates with the cam pin; and
a ~~second~~ protrusion provided on at least an object side in an optical axis direction of a portion of the cam groove with which the cam pin mates when the driving frame is retracted;

wherein, in a state where the lens group has been retracted, the cam pin ~~may contact~~contacts the ~~second~~ protrusion to prevent the cam pin from demating from the cam groove.

6. (Cancelled)

7. (New) A collapsible lens barrel whose lens group is entirely retracted in a camera main body when an image is not captured, the collapsible lens barrel comprising:

a driving frame for driving the lens group, comprising a cam pin;
a cam frame comprising a cam groove that mates with the cam pin; and
a protrusion provided on at least an object side in an optical axis direction of a portion of the cam groove with which the cam pin mates when the driving frame is retracted on a side of an imaging element with respect to a portion of the camera main body projecting farthest to the object side in the optical axis direction;

wherein, in a state where the lens group has been entirely retracted in the camera main body, the cam pin ~~may contact~~contacts the ~~second~~ protrusion to prevent the cam pin from demating from the cam groove.